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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,982	09/25/2006	Monica Cotlear De Witzmann	3863	3402

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EXAMINER	
HOBAN, MATTHEW E	
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1793	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/593,982	COTLEAR DE WITZMANN ET AL.	
	Examiner	Art Unit	
	Matthew E. Hoban	1793	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *15 July 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13-22* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

3. Claims 13-14 and 20-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eppler in 5,783,506 in view of Coulter in 6586098.

Eppler discloses a glaze that is composed primarily of boroaluminosilicate frit, where iron oxide-coated mica “color-flop pigments” (or pearlescent pigments) are added to the mixture and fired to create a glaze. The oxide coated mica is a pearlescent pigment and is added to the mixture in an amount between 6 and 8 wt% according to the eight examples provided. The glaze of Eppler is used by combining 90.5 g of a commercially available frit, which is a silicate based frit that can undergo high thermal loads, with the

oxide coated mica, where fumed silica is also added and could be considered a filler. The composition is then used to decorate a tile using a screen printing technique (See Example 8). The glaze, which comprises a frit and colorant, is considered a melt upon subsequent firing. The thus fired glaze created a decorated glass ceramic or glass article.

Eppler does not teach the use of oxide coated silica pearlescent pigments.

However, Coulter teaches pigments that can have a silica core (See Column 7, Lines 20-36), which is overcoated with a reflective layer, which is normally metallic, but can also include metal oxides (See Column 8, Lines 5-21). These two components make up the composite reflective flakes (CRF), as stated by Coulter. The flakes are then coated with metal oxides. This coating can be one metal oxide, or multiple metal oxides of high and low refractive indices (See Columns 11-14 and Figures 2a-5b). Using the above scheme Coulter states that pigments with color shifting properties (color flop) can be made (See Column 14, Line 40-50. Coulter states that these flake-based pigments are useful in glasses and ceramics as colorants (See Column 16, Lines 25-30). Therefore, one would find it obvious to replace the pigments of Eppler with those of Coulter, based on the fact that they are functional equivalents. Both provide coloring to the glass composition and are able to employ color-flop. Further proof of the compatibility of these references is the fact that Coulter states that instead of a silica core, his pigment

could have a mica core (like those of Eppler) in a non-preferred embodiment (See Column 7, lines 37-57).

4. Claims 15, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eppler in 5,783,506 in view of Coulter in 6586098 as applied to claim 13-14 above, and further in view of Merck in "Colorstream T20-02 WNT Arctic Fire Product Information".

Eppler in view of Coulter discloses a glazing composition incorporating synthetically produced plane-parallel silicon dioxide platelets coated with titanium dioxide. These pigments are color-flop or pearlescent pigments. The composition is based on a silicate frit so is able to undergo large thermal loads. The composition is then used to decorate a tile using a screen printing technique (See Example 8). The glaze, which comprises a frit and colorant, is considered a melt upon subsequent firing. The thus fired glaze created a decorated glass ceramic or glass article.

Eppler in view of Coulter do not teach the specific properties of the titanium dioxide coated silicon dioxide platelets as delineated in claims 13-14.

However, Merck teaches inorganic oxide pigments, which fall under the class of pigments as disclosed by Coulter.

Regarding claims 15 and 18: This specific pigment is based on synthetically manufactured silicon dioxide platelets coated with titanium dioxide, where their particle size ranges from 5-40 microns and more than 80% of the particles are within this limit (See Figure 4). Furthermore, the particles exist as a free flowing powder

Regarding claim 16 and 18: The pigment as disclosed by Merck has a composition of 59 wt% silicon dioxide, 36.7 wt% titanium dioxide, 2.7 wt% tin dioxide, and 1.6 wt% zirconium dioxide.

The pigments created by Merck are a species of the particles as made by Coulter Once again Coulter teaches a silicon based oxide as a core, which can be silicon dioxide. This silicon dioxide is coated with another metal oxide of high refractive index. Coulter includes Titanium Oxide, but other oxides such as zirconium dioxide and tin dioxide in his list of possible coatings (See Column 12, Lines 29-55). As mentioned previously, the metal oxides of Coulter are disclosed as being useful in glazes for ceramics and glasses. Since the pigments of Merck are a species of the pigments of Coulter, one of ordinary skill in the art would determine that these species would be useful in the same application as their genus. In other words, Coulter describes oxide coated silica, where the composition can include all of the oxides found in the Merck

pigment. Therefore, one of ordinary skill in the art would find that since Coulter's pigments are useful in glazes, as would Merck's be. Therefore one of ordinary skill would have a reasonable expectation that incorporation of the Merck pigments into the composition of Eppler would successfully impart a coloring effect. Furthermore, one of ordinary skill would realize that by adding the pigments of Merck, they could create a glaze with different coloration, while retaining a pearlescent effect. One of ordinary skill would not expect a pigment of the same structure to have differing properties. Therefore, the fact that the Merck pigments do not dissolve in a glass melt would not be surprising based on the fact that Coulter teaches their usefulness in such applications.

These different aesthetic properties would obviously motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one of ordinary skill desired to make a glaze with the coloration characteristics similar to those found in Table 2, his options would be limited. If one further desired a color-flop effect, his options would be further limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect.

5. Claims 15 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Eppler in 5,783,506 in view of Coulter in 6586098 as applied to claim 13-14 above, and further in view of Merck in "Colorstream T20-03 WNT Tropic Sunrise Product Information".

Eppler in view of Coulter discloses a glazing composition incorporating synthetically produced plane-parallel silicon dioxide platelets coated with titanium dioxide. These pigments are color-flop or pearlescent pigments. The composition is based on a silicate frit so is able to undergo large thermal loads. The composition is then used to decorate a tile using a screen printing technique (See Example 8). The glaze, which comprises a frit and colorant, is considered a melt upon subsequent firing. The thus fired glaze created a decorated glass ceramic or glass article.

Eppler in view of Coulter do not teach the specific properties of the titanium dioxide coated silicon dioxide platelets as delineated in claims 15 and 17.

However, Merck teaches inorganic oxide pigments, which fall under the class of pigments as disclosed by Coulter.

Regarding claims 15: This specific pigment is based on synthetically manufactured silicon dioxide platelets coated with titanium dioxide, where their particle size ranges from 5-40 microns and more than 80% of the particles are within this limit (See Technical Data). Furthermore, the particles exist as a free flowing powder

Regarding claim 17: The pigment as disclosed by Merck has a composition of particle size where d10 is 8.7, d50 is 19.3, and d90 is 37.1 (See Technical data).

The pigments created by Merck are a species of the particles as made by Coulter. Once again Coulter teaches a silica core. This silicon dioxide is coated with various metal oxide of high and/or low refractive index. Coulter teaches Titanium Oxide, but other oxides such as zirconium dioxide and tin dioxide are listed as possible coatings (See Column 12 Lines 29-54). As mentioned previously, the metal oxides of Coulter are disclosed as being useful in glazes for ceramics and glasses. Since the pigments of Merck are a species of the pigments of Coulter, one of ordinary skill in the art would determine that these species would be useful in the same application as their genus. In other words, Coulter describes oxide coated silica, where the composition can include all of the oxides found in the Merck pigment. Therefore, one of ordinary skill in the art would find that since Coulter's pigments are useful in glazes, as would Merck's be. Therefore one of ordinary skill would have a reasonable expectation that incorporation of the Merck pigments into the composition of Eppler would successfully impart a coloring effect. Furthermore, one of ordinary skill would realize that by adding the pigments of Merck, they could create a glaze with different coloration, while retaining a pearlescent effect. One of ordinary skill would not expect a pigment of the same structure to have differing properties. Therefore, the fact that the Merck pigments do not dissolve in a glass melt would not be surprising based on the fact that Coulter teaches their usefulness in such applications.

These different aesthetic properties would obviously motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one of ordinary skill desired to make a glaze with the coloration characteristics similar to those found in Table 2, his options would be limited. If one further desired a color-flop effect, his options would be further limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect.

6. Claims 13, 14, 19-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cotlear de Witzmann in 6,794,020 in view of Coulter in 6586098.

Cotlear de Witzmann teaches a glass composition with similar (**exactly the same)** ranges of composition as the instantly claimed ranges as in claim 19 (See column 7).This composition further contains pigments such as $ZrSiO_4$, TiO_2, CaO_2, ceramic yellow pigments, such as Zr/Sr/Pr oxides and brown pigments, such as Zn/Cr/Pr oxides among other conventional pigments, and other minor constituents (Relevant to Claim 20; Column 7, lines 20-24). This composition is intended to be used on a cooking surface so it obviously undergoes high thermal loads, which are inherently the same as those experienced by the current invention. Finally as stated by 6,794,020, this composition can be used for decorative purposes on a cooking surface, where cooking zone markings, marking for operating elements, and company logos can be applied

according to the desire of the customer. Furthermore, this process is performed by screen printing (Relevant to claims 21 22; See Column 9, lines 6-20).

Cotlear de Witzmann does not teach the use of oxide coated silica pearlescent pigments.

Coulter teaches pigments that can have a silica core (See Column 7, Lines 20-36), which is overcoated with a reflective layer, which is normally metallic, but can also include metal oxides (See Column 8, Lines 5-21). These two components make up the composite reflective flakes (CRF), as stated by Coulter. The flakes are then coated with metal oxides. This coating can be one metal oxide, or multiple metal oxides of high and low refractive indices (See Columns 11-14 and Figures 2a-5b). Using the above scheme Coulter states that pigments with color shifting properties (color flop) can be made (See Column 14, Line 40-50. Coulter states that these flake-based pigments are useful in glasses and ceramics as colorants (See Column 16, Lines 25-30). Therefore, one would find it obvious to replace the pigments of Cotlear de Witzmann with those of Coulter, based on the fact that those of Coulter are known ceramic pigments useful in glazes

The pigments of Coulter are directly importable into the glaze of Cotlear de Witzman, due to the fact that Coulter's pigments are said to be useful in glazes for glasses and

ceramics. These pigments could be used in the same amounts as the conventional pigments of Cotlear de Witzmann, which is around 12.5 wt% (See Example). Cotlear de Witzman requires the pigment only to be stable at the melt temperature. Furthermore, one of ordinary skill would realize that by adding the pigments of Bujard, they could create a glaze with different coloration, while also adding a pearlescent effect to the glaze as well. These different aesthetic properties would obviously motivate one of ordinary skill, since the art of glazing deals heavily with aesthetics. Coloration is a major aspect of aesthetics. If one desired a color-flop effect, his options would be limited. Therefore, one would chose from a very finite number of pigments to create the desired aesthetic effect. The motivation to combine is thus to create such a desired aesthetic effect.

Response to Arguments

7. Applicant's arguments with respect to claims 13-22 have been considered but are moot in view of the new ground(s) of rejection.

8. Applicant's arguments, see page 2-16, filed 7/15/2008, with respect to the rejection(s) of claim(s) 13 under USC 103 have been fully considered and are persuasive. The arguments clearly and persuasively state that Brujard does not fall within the instant claims based on the "consisting of" language used to describe the invention. Therefore, the rejection has been withdrawn. However, upon further

consideration, a new ground(s) of rejection is made in view of Coulter in 6586098. Coulter is used in the same capacity as Brujard but is free of Brujard's deficiencies.

Conclusion

Applicant's amendment (on 1/31/2008) necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew E. Hoban whose telephone number is (571) 270-3585. The examiner can normally be reached on Monday - Friday from 7:30 AM to 5 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jerry Lorengo can be reached on (571) 272-1233. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Jerry A Lorengo/
Supervisory Patent Examiner, Art Unit 1793

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